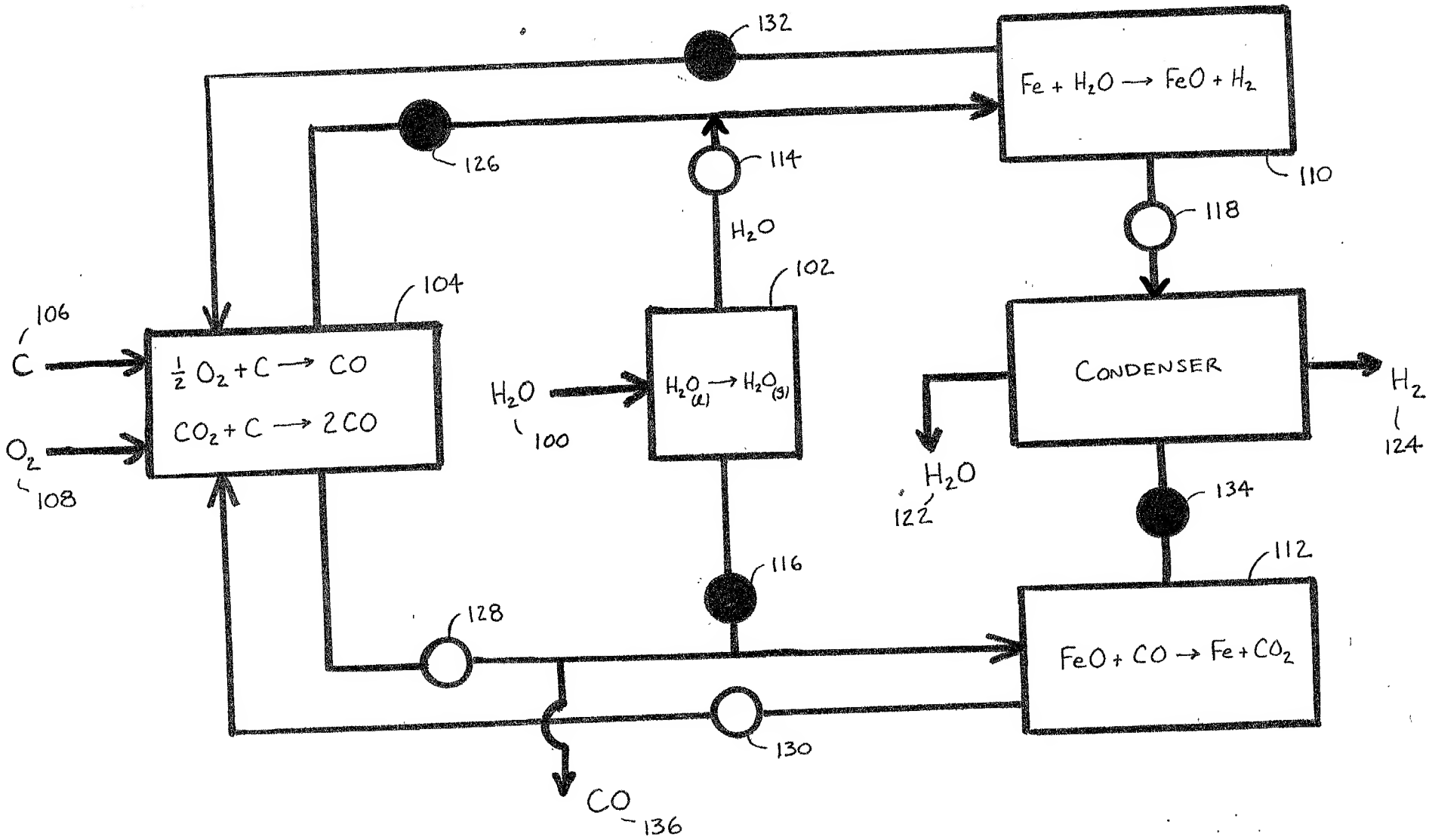
132
Fe + H2O → FeO + H2
126
114
110
118
H2O
102
104
106
C
½ O2 + C → CO
CO2 + C → 2CO
H2O(l) → H2O(g)
H2O
100
CONDENSER
H2
124
O2
108
H2O
122
134
112
116
128
FeO + CO → Fe + CO2
130
CO
136

Fig. 1

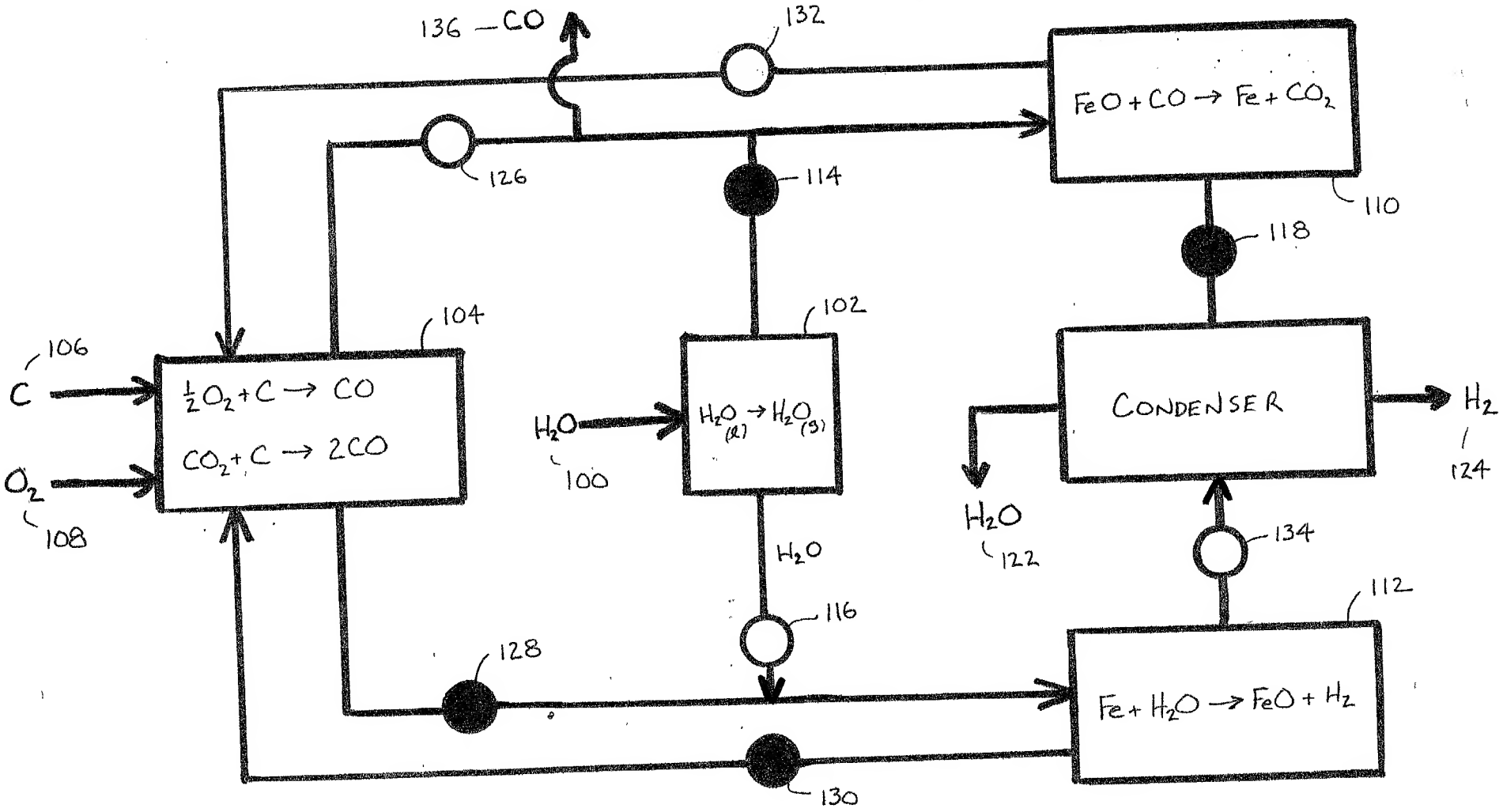
136 — CO
132
FeO + CO → Fe + CO2
126
114
110
118
104
102
106
C
½O2 + C → CO
CO2 + C → 2CO
H2O
H2O(l) → H2O(g)
CONDENSER
H2
124
O2
108
100
H2O
122
134
H2O
112
116
128
Fe + H2O → FeO + H2
130

Fig. 2

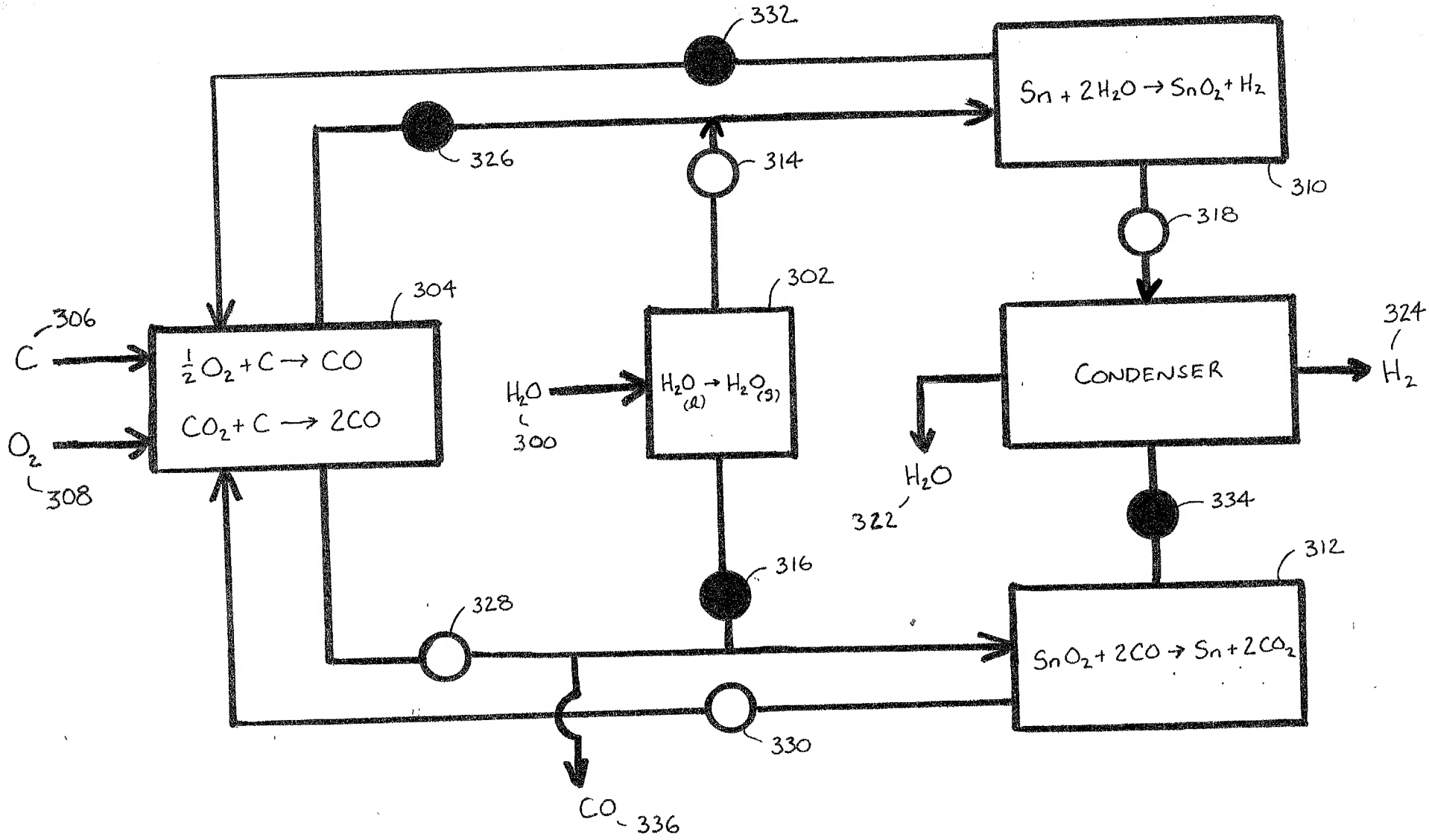
332
$Sn + 2H_2O \rightarrow SnO_2 + H_2$
326
314
310
318
304
302
306
C
$\frac{1}{2}O_2 + C \rightarrow CO$
$CO_2 + C \rightarrow 2CO$
H_2O
300
$H_2O_{(l)} \rightarrow H_2O_{(g)}$
CONDENSER
324
H_2
O_2
308
H_2O
322
334
312
316
328
$SnO_2 + 2CO \rightarrow Sn + 2CO_2$
330
CO
336

Fig. 3

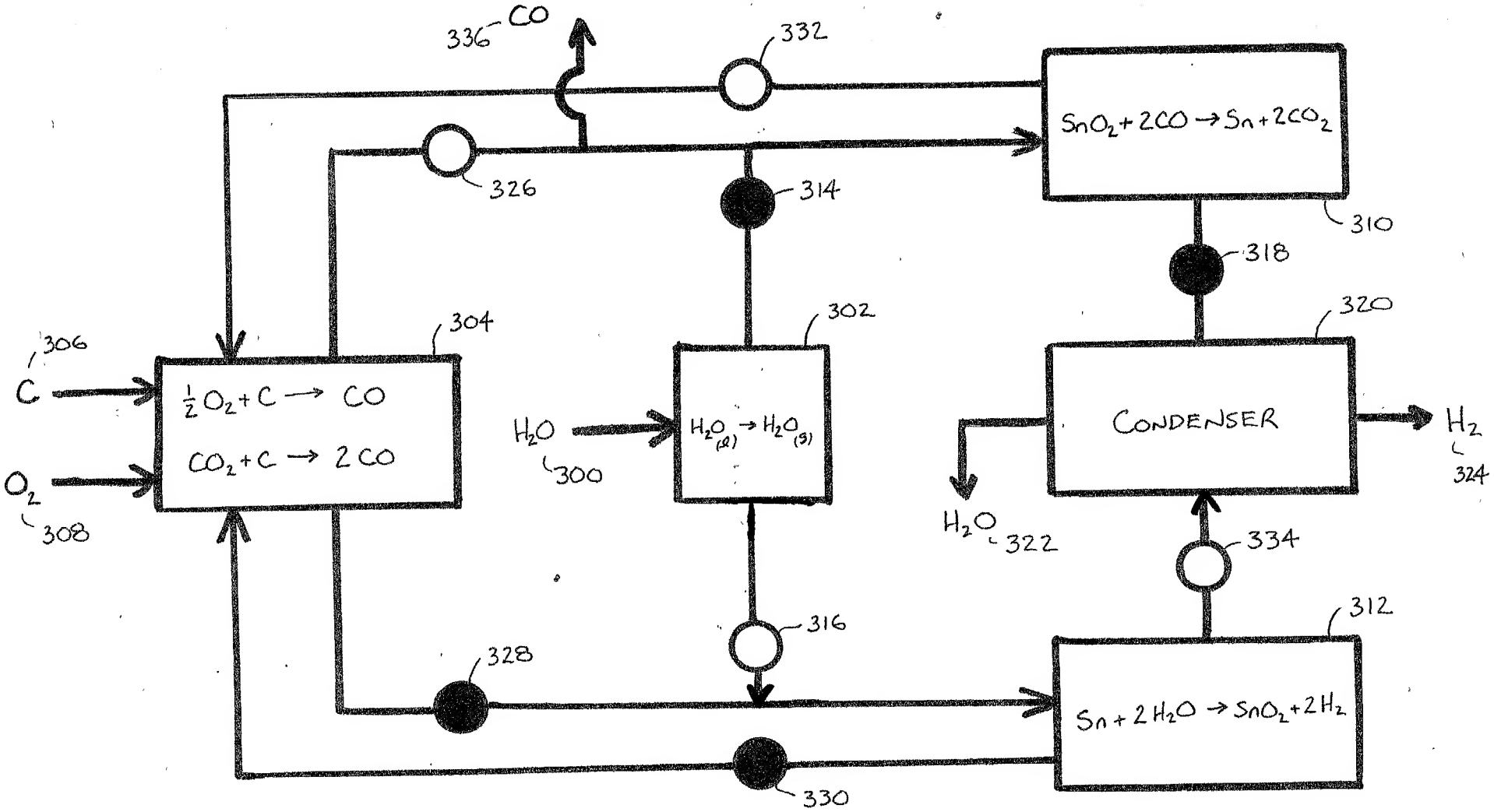
336
CO
332
$SnO_2 + 2CO \rightarrow Sn + 2CO_2$
326
314
310
318
320
304
302
306
C
$\frac{1}{2}O_2 + C \rightarrow CO$
$CO_2 + C \rightarrow 2CO$
H_2O
300
$H_2O_{(l)} \rightarrow H_2O_{(s)}$
CONDENSER
H_2
324
O_2
308
H_2O
322
334
316
312
328
$Sn + 2H_2O \rightarrow SnO_2 + 2H_2$
330

Fig. 4

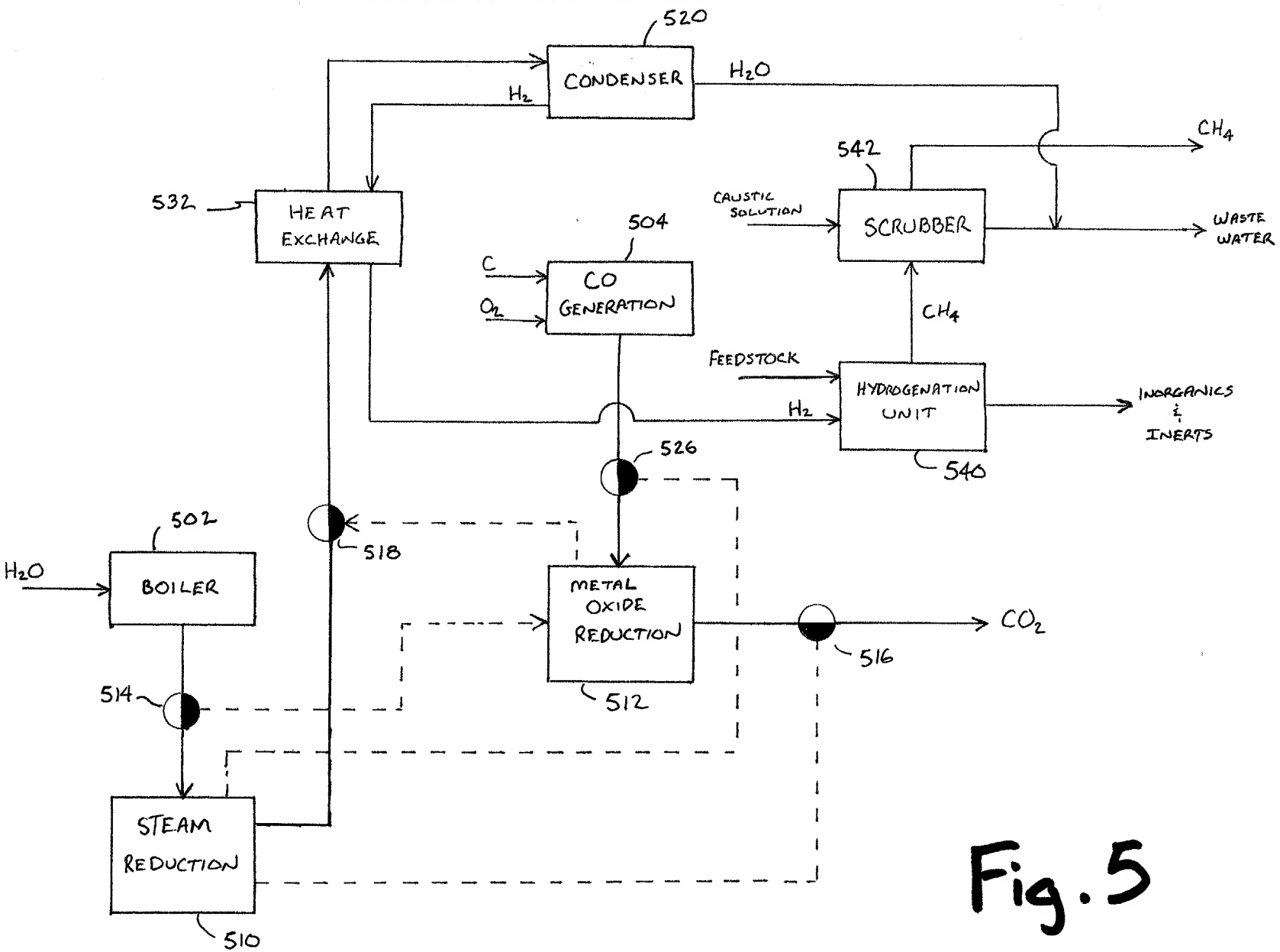
520
CONDENSER
H_2O
H_2
CH_4
542
532
HEAT EXCHANGE
CAUSTIC SOLUTION
SCRUBBER
WASTE WATER
504
C
CO GENERATION
O_2
CH_4
FEEDSTOCK
HYDROGENATION UNIT
H_2
INORGANICS & INERTS
526
540
502
518
H_2O
BOILER
METAL OXIDE REDUCTION
CO_2
516
514
512
STEAM REDUCTION
510

Fig. 5

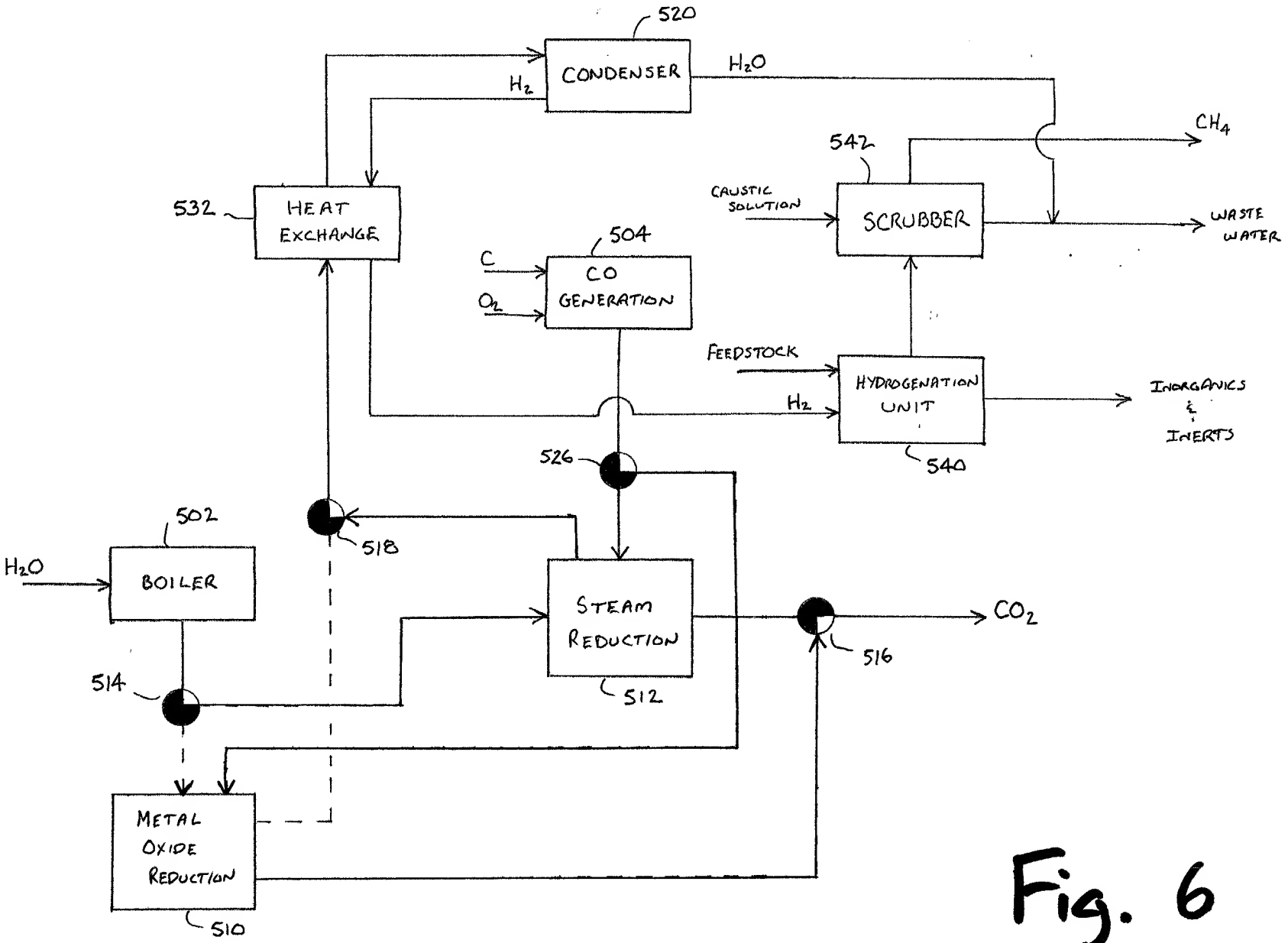
520
CONDENSER
H_2
H_2O
CH_4
542
CAUSTIC SOLUTION
SCRUBBER
WASTE WATER
532
HEAT EXCHANGE
504
C
O_2
CO GENERATION
FEEDSTOCK
HYDROGENATION UNIT
H_2
INORGANICS & INERTS
540
526
502
518
H_2O
BOILER
STEAM REDUCTION
CO_2
516
514
512
METAL OXIDE REDUCTION
510

Fig. 6

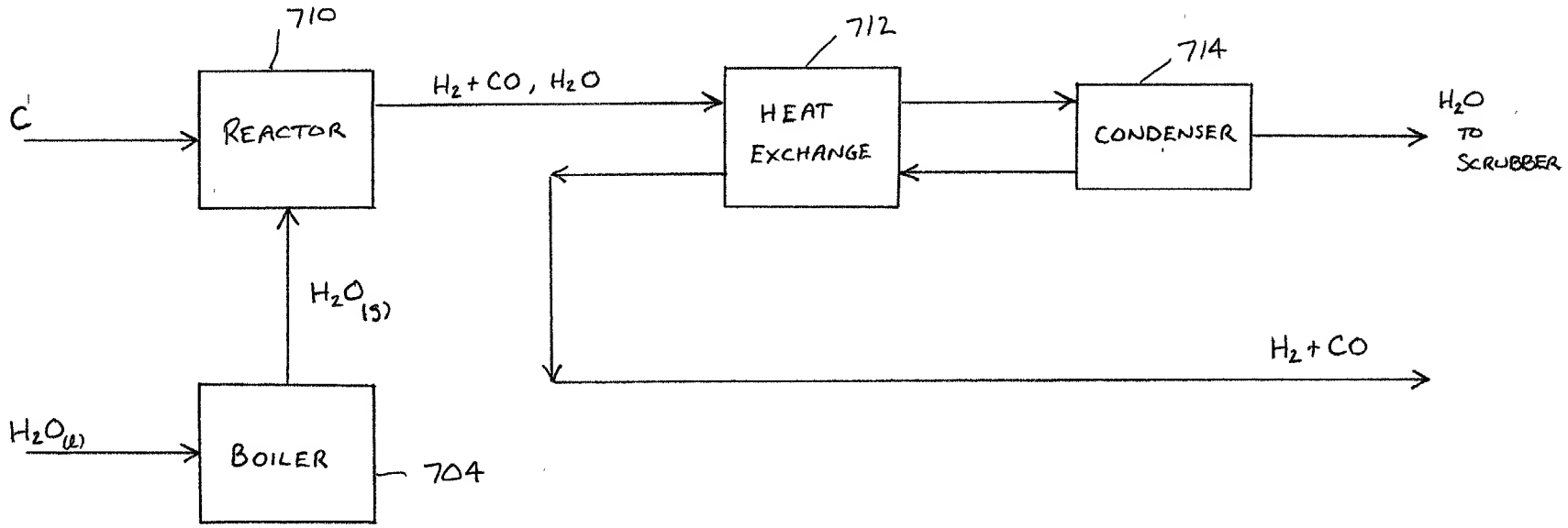
710
712
714
C
REACTOR
$H_2 + CO$, H_2O
HEAT EXCHANGE
CONDENSER
H_2O TO SCRUBBER
$H_2O_{(g)}$
$H_2 + CO$
$H_2O_{(l)}$
BOILER
704

Fig. 7

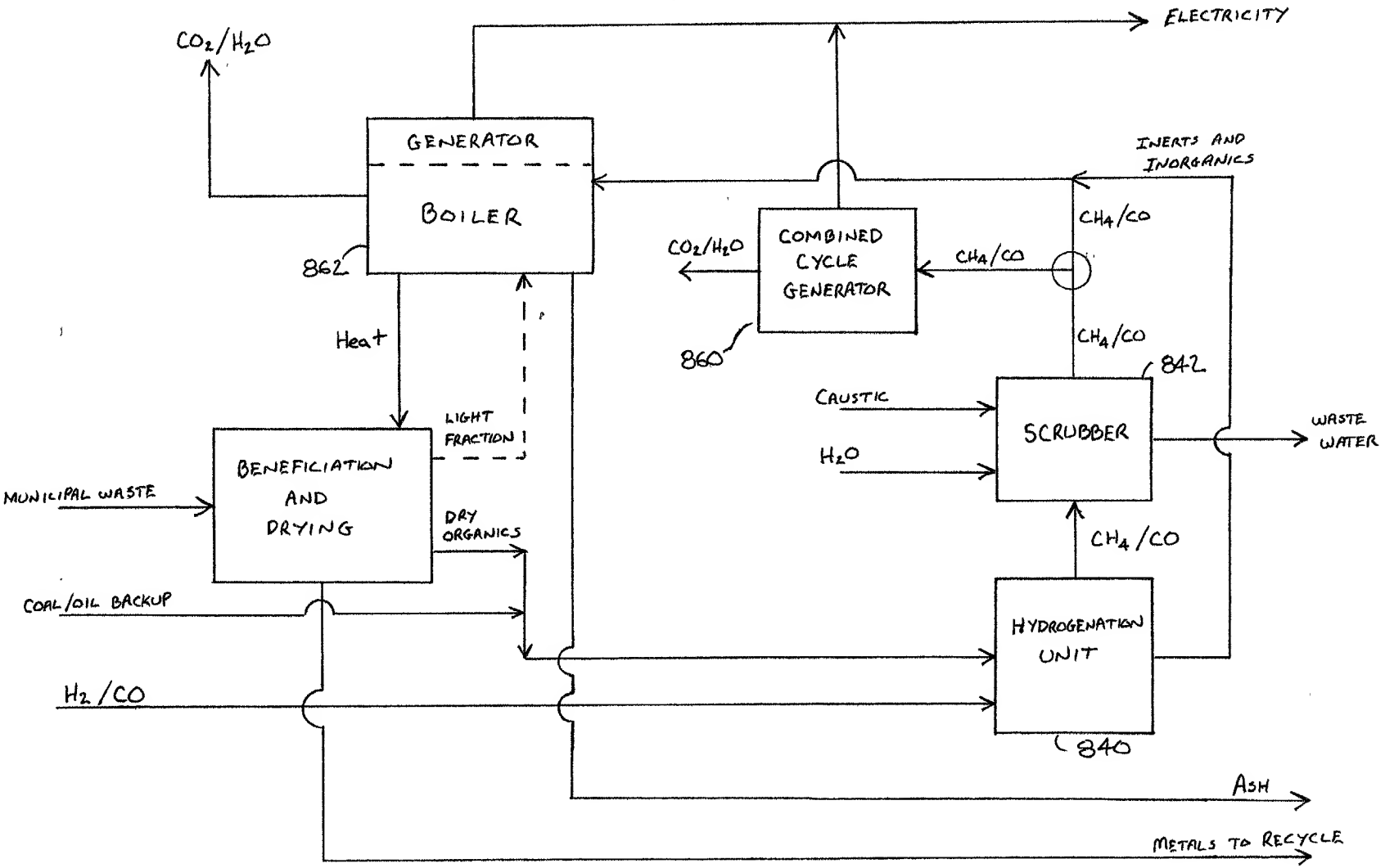
ELECTRICITY
CO_2/H_2O
GENERATOR
BOILER
862
INERTS AND INORGANICS
CH_4/CO
CO_2/H_2O
COMBINED CYCLE GENERATOR
CH_4/CO
860
CH_4/CO
842
Heat
CAUSTIC
SCRUBBER
WASTE WATER
LIGHT FRACTION
H_2O
BENEFICIATION AND DRYING
MUNICIPAL WASTE
DRY ORGANICS
CH_4/CO
COAL/OIL BACKUP
HYDROGENATION UNIT
H_2/CO
840
ASH
METALS TO RECYCLE

Fig. 8

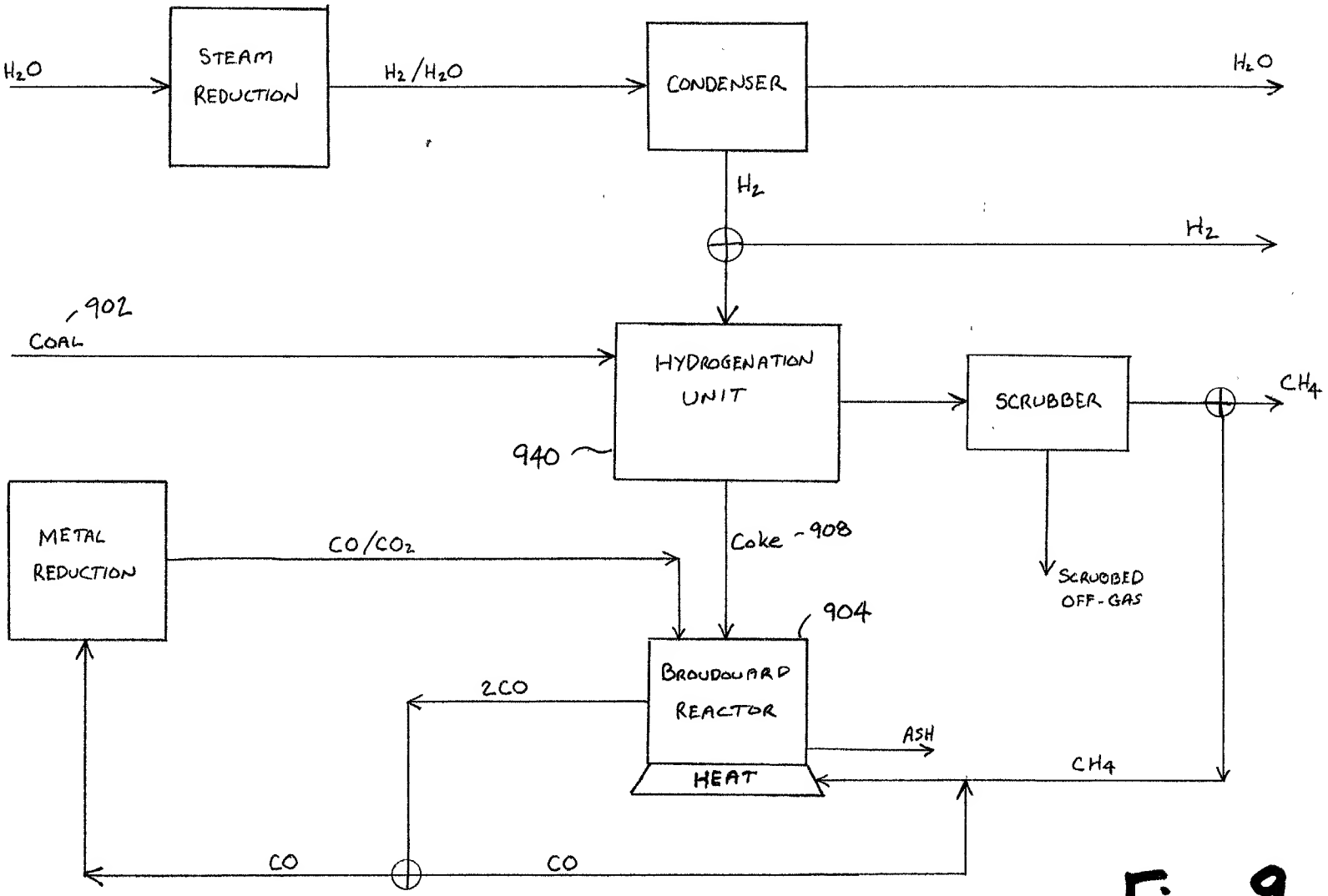
H_2O
STEAM REDUCTION
H_2/H_2O
CONDENSER
H_2O
H_2
H_2
902
COAL
HYDROGENATION UNIT
940
SCRUBBER
CH_4
METAL REDUCTION
CO/CO_2
Coke - 908
SCRUBBED OFF-GAS
904
BOUDOUARD REACTOR
2CO
ASH
HEAT
CH_4
CO
CO

Fig. 9